

**PATENT APPLICATION**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re application of

Docket No: Q77322

Ryosuke KURIBAYASHI

Appln. No.: Unknown

Confirmation No.: Unknown

Group Art Unit: Unknown

Filed: February 9, 2004

Examiner: Unknown

For: OPTICAL SIGNAL REGENERATIVE REPEATER, OPTICAL GATE CONTROL METHOD,  
AND OPTICAL SIGNAL REGENERATION METHOD

**INFORMATION DISCLOSURE STATEMENT**  
**UNDER 37 C.F.R. §§ 1.97 and 1.98**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

In accordance with the duty of disclosure under 37 C.F.R. § 1.56, Applicant hereby notifies the U.S. Patent and Trademark Office of the documents which are listed on the attached PTO/SB/08 A & B (modified) form and/or listed herein and which the Examiner may deem material to patentability of the claims of the above-identified application.

One copy of each of the listed documents is submitted herewith.

1. Japanese Patent Application Publication No. 8-163047, published June 21, 1996.
2. H. Thiele et al., "Recirculating loop demonstration of 40 Gbit/s all-optical 3R data regeneration using a semiconductor nonlinear interferometer", Electronics Letters, Vol. 35, No. 3, February 4, 1999, pp. 230-231.
3. H. Kurita et al., "All-Optical 3R Regeneration based on Optical Clock Recovery with Mode-Locked LDs", Proc. of ECOC 99, PD3-6, (1999).

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4. K. Tajima, "All-Optical Switch with Switch-Off Time Unrestricted by Carrier Lifetime", Japan J. Appl. Phys. Vol. 32, Part 2, No. 12A, December 1, 1993, pp. L1746-L1749.
5. K. Tajima et al., "Ultrafast polarization-discriminating Mach-Zehnder all-optical switch", Appl. Phys. Lett. 67, (25), December 18, 1995, pp. 3709-3711.
6. M. Farries et al., "Optical fiber switch employing a Sagnac interferometer", Appl. Phys. Lett., (1), July 3, 1989, pp. 25-26.
7. Y. Ueno et al., "3.8-THz Wavelength Conversion of Picosecond Pulses Using a Semiconductor Delayed-Interference Signal-Wavelength Converter (DISC)", IEEE Photonics Technology Letters, Vol. 10, No. 3, March 1998, pp. 346-348.
8. J. Leuthold et al., "Novel 3R Regenerator Based on Semiconductor Optical Amplifier Delayed-Interference Configuration", IEEE Photonics Technology Letters, Vol. 13, No. 8, August 2001, pp. 860-862.
9. Japanese Patent Application Publication No. 2002-229081, published August 14, 2002.
10. Japanese Patent Application Publication No. 2001-249371, published September 14, 2001.
11. H. Kurita et al., "Ultrafast All-Optical Signal Processing with Mode-Locked Semiconductor Lasers", IEICE Trans. Electron., Vol. E81-C, No. 2, February 1998, pp. 129-139.
12. B. Lavigne et al., "Cascade of 100 optical 3R regenerators at 40Gbit/s Based on all-active Mach Zehnder interferometers", Proc. 27<sup>th</sup> Eur. Conf. on Opt. Comm. (ECOC 01- Amsterdam), pp. 290-291.

The present Information Disclosure Statement is being filed: (1) No later than three months from the application's filing date; (2) Before the mailing date of the first Office Action on the merits (whichever is later); or (3) Before the mailing date of the first Office Action after filing a request for

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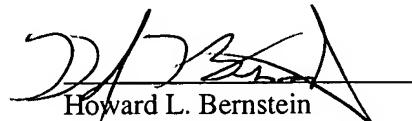
continued examination (RCE) under § 1.114, and therefore, no Statement under 37 C.F.R. § 1.97(e) or fee under 37 C.F.R. § 1.17(p) is required.

In compliance with the concise explanation requirement under 37 C.F.R. § 1.98(a)(3) for foreign language documents, Applicant states that above references 1, 9 and 10 are discussed within the specification beginning at page 2, line 1.

The submission of the listed documents is not intended as an admission that any such document constitutes prior art against the claims of the present application. Applicant does not waive any right to take any action that would be appropriate to antedate or otherwise remove any listed document as a competent reference against the claims of the present application.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account. A duplicate copy of this paper is attached.

Respectfully submitted,



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WASHINGTON OFFICE  
23373  
CUSTOMER NUMBER

Date: February 9, 2004

Substitute for Form 1449 A & B/PTO				Complete if Known	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>				Application Number	Unknown
<i>(use as many sheets as necessary)</i>				Confirmation Number	Unknown
				Filing Date	February 09, 2004
				First Named Inventor	Ryosuke KURIBAYASHI
				Art Unit	Unknown
				Examiner Name	Unknown
Sheet	1	of	1	Attorney Docket Number	Q77322

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Document Number		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document
		Number	Kind Code <sup>2</sup> (if known)		
	US				
	US				

FOREIGN PATENT DOCUMENTS							
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document			Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Translation <sup>6</sup>
		Country Code <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>5</sup> (if known)			
	JP	8-163047	A	06/21/1996			
	JP	2002-229081	A	08/14/2002			
	JP	2001-249371	A	09/14/2001			

NON PATENT LITERATURE DOCUMENTS						
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city, and/or country where published.				Translation <sup>6</sup>
		H. Thiele et al., "Recirculating loop demonstration of 40 Gbit/s all-optical 3R data regeneration using a semiconductor nonlinear interferometer", Electronics Letters, Vol. 35, No. 3, February 4, 1999, pp. 230-231.				
		H. Kurita et al., "All-Optical 3R Regeneration based on Optical Clock Recovery with Mode-Locked LDs", Proc. of ECOC 99, PD3-6, (1999).				
		K. Tajima, "All-Optical Switch with Switch-Off Time Unrestricted by Carrier Lifetime", Japan J. Appl. Phys. Vol. 32, Part 2, No. 12A, December 1, 1993, pp. L1746-L1749.				
		K. Tajima et al., "Ultrafast polarization-discriminating Mach-Zehnder all-optical switch", Appl. Phys. Lett. 67, (25), December 18, 1995, pp. 3709-3711.				
		M. Farries et al., "Optical fiber switch employing a Sagnac interferometer", Appl. Phys. Lett., (1), July 3, 1989, pp. 25-26.				
		Y. Ueno et al., "3.8-THz Wavelength Conversion of Picosecond Pulses Using a Semiconductor Delayed-Interference Signal-Wavelength Converter (DISC)", IEEE Photonics Technology Letters, Vol. 10, No. 3, March 1998, pp. 346-348.				
		J. Leuthold et al., "Novel 3R Regenerator Based on Semiconductor Optical Amplifier Delayed-Interference Configuration", IEEE Photonics Technology Letters, Vol. 13, No. 8, August 2001, pp. 860-862.				
		H. Kurita et al., "Ultrafast All-Optical Signal Processing with Mode-Locked Semiconductor Lasers", IEICE Trans. Electron., Vol. E81-C, No. 2, February 1998, pp. 129-139.				
		B. Lavigne et al., "Cascade of 100 optical 3R regenerators at 40Gbit/s Based on all-active Mach Zehnder interferometers", Proc. 27 <sup>th</sup> Eur. Conf. on Opt. Comm. (ECOC 01- Amsterdam), pp. 290-291.				

Examiner Signature		Date Considered	
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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup>Applicant's unique citation designation number (optional). <sup>2</sup>See Kind Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov), MPEP 901.04 or in the comment box of this document. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST. 3). <sup>4</sup>For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup>Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup>Applicant is to indicate here if English language Translation is attached.